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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,999	10/19/2001	Hirohisa Kishi	10517/111	7130

23838 7590 08/07/2003

KENYON & KENYON
1500 K STREET, N.W., SUITE 700
WASHINGTON, DC 20005

EXAMINER

HWU, DAVIS D

ART UNIT	PAPER NUMBER
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3752

DATE MAILED: 08/07/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,999

Applicant(s)

KISHI ET AL.

Examiner

Davis Hwu

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's response to the restriction requirement has been fully considered and the restriction requirement is hereby withdrawn. Claims 1-10 have been examined.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedges.

The patent to Hedges shows a fuel injection valve body for a direct injection type internal combustion engine that injects fuel directly into a combustion chamber of an internal combustion engine comprising:

- a nozzle body tip 10" at a tip portion of the fuel injection valve body, wherein the nozzle body tip is formed with a nozzle hole and formed in a protruded shape without forming a corner portion or a recessed portion on a surface thereof, wherein the nozzle body tip protrudes in a conical shape and the tip of the conical shape is spherical, and wherein the nozzle body tip is spherical as recited in claims 2 and 3.

4. Claims 4-6 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedges.

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The patent to Hedges shows a fuel injection valve body for a direct injection type internal combustion engine that injects fuel directly into a combustion chamber of an internal combustion engine comprising:

- a nozzle body tip 10" at a tip portion of the fuel injection valve body, wherein the nozzle body tip is formed with a nozzle hole and formed in a protruded shape without forming a corner portion or a recessed portion on a surface thereof, wherein the nozzle body tip protrudes in a conical shape and the tip of the conical shape is spherical, and wherein the nozzle body tip is spherical as recited in claims 5, 6, 9, and 10;
- a cap 110 disposed on an outer periphery of the nozzle body tip so as to secure the nozzle body to a main body of the fuel injection valve body, wherein the nozzle body tip and a tip portion of the cap form a continuous tip portion of the fuel injection valve body, and continuous tip portion is formed in a protruded shape without forming a corner portion or a recessed portion on a surface thereof.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Tsuji et al., Mock et al., and Raufeisen et al. are pertinent to Applicant's invention.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davis Hwu whose telephone number is 703-305-1663.

The examiner can normally be reached on M-F 7:30 AM to 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Y. Mar can be reached on (703)308-2087. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9302 for regular communications and (703)872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.

A handwritten signature in black ink, appearing to read 'Davis Hwu', with a long horizontal flourish extending to the right.

Davis Hwu
August 4, 2003